

STATISTICAL REVIEW OF COUNTING ACCELEROMETER DATA FOR NAVY AND MARINE FLEET AIRCRAFT FROM 1 JAN 1962 TO 30 JUN 1982

Warren J. Williams Aircraft and Crew Systems Technology Directorate NAVAL AIR DEVELOPMENT CENTER Warminster, Pennsylvania 18974

ew Systems 10.
AIR DEVELOPMENT CEIL
ninster, Pennsylvania 18974

T NOVEMBER 1982

State The William State of the State of the

SEMI-ANNUAL SUMMARY REPORT AIRTASK NO. A5305302/0014/30000001 Work Unit DX731

19971107 079

Approved for Public Release: Distribution Unlimited

Prepared fol Depar ment of igton,

NOTICES

REPORT NUMBERING SYSTEM - The numbering of technical project reports issued by the Naval Air Development Center is arranged for specific identification purposes. Each number consists of the Center acronym, the calendar year in which the number was assigned, the sequence number of the report within the specific calendar year, and the official 2-digit correspondence code of the Command Office or the Functional Directorate responsible for the report. For example: Report No. NADC-78015-20 indicates the fifteeth Center report for the year 1978, and prepared by the Systems Directorate. The numerical codes are as follows:

CODE	OFFICE OR DIRECTORATE
00 .	Commander, Naval Air Development Center
01	Technical Director, Naval Air Development Center
02	Comptroller
10	Directorate Command Projects
20	Systems Directorate
30	Sensors & Avionics Technology Directorate
40	Communication & Navigation Technology Directorate
50	Software Computer Directorate
60	Aircraft & Crew Systems Technology Directorate
70	Planning Assessment Resources
80	Engineering Support Group

PRODUCT ENDORSEMENT - The discussion or instructions concerning commercial products herein do not constitute an endorsement by the Government nor do they convey or imply the license or right to use such products.

Deputy Director

APPROVED BY:

__ U

NATE: 1-19-8

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE	READ INSTRUCTIONS BEFORE COMPLETING FORM				
1. REPORT NUMBER 2. GOVT ACC	ESSION NO. 3. RECIPIENT'S CATALOG NUMBER				
RCS NADC 13920-2					
4. TITLE (and Subtitle)	5. TYPE OF REPORT & PERIOD COVERED				
	Semiannual Summary Report				
Statistical Review of Counting Accelerome					
Data for Navy and Marine Fleet Aircraft f	5. PERFORMING ORG. REPORT NUMBER				
1 January 1962 to 30 June 1982					
7. AUTHOR(*)	8. CONTRACT OR GRANT NUMBER(a)				
Warren J. Williams					
9. PERFORMING ORGANIZATION NAME AND ADDRESS	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS				
Naval Air Development Center					
Aircraft and Crew Systems Technology Dire	ctorate AIRTASK A5305302/0014/				
Warminster, PA 18974	30000001 Work Unit DX731				
11. CONTROLLING OFFICE NAME AND ADDRESS	12. REPORT DATE				
Naval Air Systems Command	. 1 November 1982				
Department of the Navy	13. NUMBER OF PAGES				
Washington, DC 20361	150				
14. MONITORING AGENCY NAME & ADDRESS(If different from Controlli	ng Office) 15. SECURITY CLASS. (of this report)				
	UNCLASSIFIED				
•	154. DECLASSIFICATION/DOWNGRADING SCHEDULE				
Approved for Public Release; distribution	unlimited				
17. DISTRIBUTION STATEMENT (of the abetrect entered in Block 20, if different from Report)					
18. SUPPLEMENTARY NOTES					
19. KEY WORDS (Continue on reverse side if necessary and identify by b.	lock number)				
Counting Accelerometer Statistics; Calend Training Navy; Combat Navy; Training Mari					
20. ABSTRACT (Continue on reverse side if necessary and identify by bi	ock number)				
This report is a specialized summary of normal acceleration data recorded by counting accelerometers. Data are separated by calendar time and mission category. Only data reported in the counting accelerometer program are included.					
	I I				

JURITY CLASSIFIC	CATION OF THIS PAGE (When	n Dete Entered)		
				•
			-	
				,
			_	
•		•	-	
			•	
	-			
	-			
				•
	-			
				-
	_			
	-			
			· · · · · · · · · · · · · · · · · · ·	
			-	

SUMMARY

This is a semiannual progress report, and it presents a specialized summary of the data in the counting accelerometer program. Statistics describing Navy and Marine aircraft cumulative g-count exceedances are calculated and tabulated. These tabulations are separated by calendar time and into four major categories of Fleet experience: Navy Training, Navy Combat, Marine Training, and Marine Combat.

Load rate distributions in counts per 1000 hours are calculated for all g-levels. Distribution statistics (mean, standard deviation, and skewness) are presented for most models.

SPECIAL NOTES

- 1. This report supersedes and replaces all previous issues of this semiannual report. Previous issue was Report Control Symbol NADC 13920-2, dated 1 May 1982.
- 2. Additional copies of this report may be obtained from:

Administrator
Defense Technical Information Center (DTIC)
Building 5, Cameron Station
Alexandria, VA 22314

3. Any inquiries, questions, or additional information desired concerning the contents of this report shall be directed to:

Commander Naval Air Development Center (Code 6042) Warminster, PA 18974

Area Code 215-441-2051 AUTOVON 441-2051

TABLE OF CONTENTS

	PAGE
SUMMARY	1
SPECIAL NOTES	2
INDEX OF CURRENTLY OPERATIONAL MODELS	4
INDEX OF OUT-OF-SERVICE MODELS AND MODELS WHICH HAVE NOT REPORTED COUNTING ACCELEROMETER DATA DURING THE PREVIOUS	
12 MONTHS	6
LIST OF SYMBOLS	7
INTRODUCTION	9
DISCUSSION	10
TABLES	13
APPENDIX A - OUT-OF-SERVICE MODELS AND MODELS WHICH HAVE NOT REPORTED COUNTING ACCELEROMETER DATA DURING THE PREVIOUS	
12 MONTHS	A-1
APPENDIX B - THE DETERMINATION OF SAMPLE STATISTICS FOR COUNTING ACCELEROMETER DATA	B-1
OVUITING ACCIDENCIETEN DATA	, L

INDEX OF CURRENTLY OPERATIONAL MODELS

Model Model	Previous 12 Months Data	All Data
A-4F (Blue Angels)	Page 14	15
A-3B	16	17
KA-3B	18	19
A-4F	20	21
EA-4F	22	23
TA-4F	24	25
TA-4J	26	27
A-4M	28	29
EA-6A	30	31
EA-6B	32	33
KA-6D	34	35
A-6E	36	37
A-7A	38	39
A-7B	40	41
A-7C	42	43
TA-7C	44	45
A-7E	46	47
C-2A	48	49
QF-4B	· 50	51
RF-4B	52	53
F-4J	54	55
EF-4J	56	57
F-4N	58	59
F-4S	60	61
RF-8G	62	63
DF-8J	64	65
P-3A	66	67
EP-3A	68	69
RP-3A	70	71
P-3B	.72	73
EP-3B	74	75
P-3C	76	77
EP-3E	78	79
ES-2D	80	81
S-3A	82	83
T-2C	84	85
T-28B	86	87
T-34C	88	89
T-39D	90	91
T-44A	92	93
AV-8A	94	95
TAV-8A	96	97

INDEX OF OUT-OF-SERVICE MODELS AND MODELS WHICH HAVE NOT REPORTED COUNTING ACCELEROMETER DATA DURING THE PREVIOUS 12 MONTHS (APPENDIX A)

Model Model	All Data
F-4J (Blue Angels) F-11A (Blue Angels) (NOTE 1) F-11A (Blue Angels) (NOTE 2) A-1H A-1J EKA-3B A-4B TA-4B A-4C TA-4G A-5A A-5B RA-5C A-6A NA-6A A-6B A-6C A-7H KC-130F AF-1E F-4A TF-4A F-4B F-6A F-8A RF-8A TF-8A F-8B F-8C F-8D F-8E	A-2 A-3 A-4 A-5 A-6 A-7 A-8 A-9 A-10 A-11 A-12 A-13 A-14 A-15 A-16 A-17 A-18 A-19 A-20 A-21 A-22 A-23 A-24 A-25 A-26 A-27 A-28 A-29 A-30 A-31 A-32
F-4B F-6A F-8A RF-8A TF-8B F-8C F-8D	A-24 A-25 A-26 A-27 A-28 A-29 A-30 A-31
DF-8F F-8H F-8J F-8K F-8L DF-8L EF-10B F-11A WP-3A S-2D	A-33 A-34 A-35 A-36 A-37 A-38 A-39 A-40 A-41 A-42

NOTE 1: Transducer Load Levels (6, 7, 8.5, 10g)
NOTE 2: Transducer Load Levels (4, 5, 6, 7g)

INDEX OF OUR-OF-SERVICE MODELS AND MODELS WHICH HAVE NOT REPORTED COUNTING ACCELEROMETER DATA DURING THE PREVIOUS 12 MONTHS (APPENDIX A)

<u>Model</u>	All Data
S-2E S-2G T-2A T-2B T-28C T-34B	A-43 A-44 A-45 A-46 A-47 A-48
NOTE 1: NOTE 2:	Transducer Load Levels (6, 7, 8.5, 10g) Transducer Load Levels (4, 5, 6, 7g)

LIST OF SYMBOLS

MEAN	OR	x	MEAN CUMULATIVE COUNTS PER 1000 HOURS
STD DEV	OR	S	STANDARD DEVIATION OR CUMULATIVE COUNTS PER 1000 HOURS
SKEWNESS	OR	A ₃	SKEWNESS OF LOAD RATE DISTRIBUTION
		*	NO DATA IN THIS CATEGORY
		**	INSUFFICIENT DATA IN THIS CATEGORY

THIS PAGE LEFT INTENTIONALLY BLANK

INTRODUCTION

The NAVAIRDEVCEN (Naval Air Development Center) is engaged in various flight maneuver-loads programs as assigned by the Naval Air Systems Command. One of these is the counting accelerometer program, and under this program data have been collected and reported since 1955.

The primary purpose of this program is to provide the flight load history of individual Navy and Marine aircraft. Other purposes include, but are not limited to, the comparison of operational loads environment with structural design requirements, the comparison of load histories of one model with another, and the determination of expected loads environment of future models. More recently, however, these data are used as the major input in the NAVAIRDEVCEN Aircraft Structural Appraisal of Fatigue Effects Program in estimating structural fatigue damage for those aircraft which do not have counting accelerometer data.

DISCUSSION

This is a semi-annual progress report. Included are statistical summaries of counting accelerometer data for all Navy and Marine aircraft. In-service models appear in the main text. Out-of-service models or models which have not reported counting accelerometer data during the previous 12 months appear in Appendix A. The summary for each out-of-service model is its final summary. New models are added as their counting accelerometer data becomes available.

For each model, the following statistics are presented: (See Appendix B for the statistical procedures.)

- x the estimated mean load exceedances (counts at 1000 flt. hrs.) for each g-level recorded on the counting accelerometer.
- S estimated standard deviation (counts at 1000 flt. hrs.) of the load exceedances for each g-level.
- A_3 estimated skewness factor for the load exceedance distribution.

Two statistical summaries describing cumulative g-count exceedances and flight hours for each currently operational model are presented:

- 1. The first summary includes all quality-control accepted data reported in the time period comprising the terminal date of this report and the 12 months preceding that date.
- 2. The second includes all quality-control accepted data reported in the counting accelerometer program from the day each airplane was delivered for service to the terminal date of this report.

The first summary, which includes only the most recent 12 months, shows an indication of a model's current severity of usage. The second summary describes the severity of loads experienced by all airplanes of each model since acceptance. A comparison of the first summary with the second shows whether current usage for any model is more or less severe than usage over its full lifetime.

A further breakdown by mission category is provided for each airplane model in both of the aforementioned summaries. These categories are defined as follows:

1. Navy Training - an airplane in a Navy squadron assigned to a non-combat zone. (This includes all Navy airplanes not classified as being in a combat zone.)

- 2. Navy Combat an airplane in a Navy squadron assigned to a combat zone.
- 3. Marine Training an airplane in a Marine squadron assigned to a non-combat zone. (This includes all Marine airplanes not classified as being in a combat zone.)
- 4. Marine Combat an airplane in a Marine squadron assigned to a combat zone.

The statistics for the A-4F Blue Angels are separated into solo aircraft and diamond formation aircraft. In the subsequent tables, the total flight hours shown for a given model are the sum of the hours reported for each category. However, summing the number of airplanes reported in each category can result in a number exceeding the total aircraft, because the same airplane may have seen service in two or more categories. Its data were separated for calculation of statistics for each respective category.

Some general statistical observations for fleet-wide loads data are the following:

- 1. The load exceedance distribution for many of the aircraft models is non-normal (particularly asymmetrical) at all the g-levels recorded. In general, the degree of asymmetry increases with increasing g-level.
- 2. The scatter measure $\frac{S}{x}$ (coefficient of variation) increases with higher g-levels.
- 3. For a given g-level, there is more scatter in loads received during training than during combat.
- 4. Differences exist in loads frequency among various configurations of the same model and various mission categories within the same configuration.

THIS PAGE LEFT INTENTIONALLY BLANK

T A B L E S

COUNTING ACCELEROMETER DATA ARE SUBJECT TO QUALITY CONTROL CRITERIA MODIFICATIONS. THUS, IN SUCCEEDING REPORTS, MODEL-WIDE SUMMARY STATISTICS ARE SUBJECT TO CHANGE EVEN THOUGH A MODEL MAY NO LONGER BE IN SERVICE.

DATA FROM 7-81 THRU 6-82

MODEL A-4F BLUE ANGELS

8 AIRCRAFT 1419 HOURS

SOLO					
	PRACTICE	5.0G	6.0G	7.0G	8.0G
7 AIRCRAFT	MEAN	7702.00	1975.00	239.00	30.00
369 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	SHOW	5.0G	6.0G	7.0G	8.0G
5 AIRCRAFT	MEAN	14258.00	4067.00	607.00	124.00
89 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
DIAMOND					
	PRACTICE	5.0G	6.0G	7.0G	8.0G
8 AIRCRAFT	MEAN	900.00	186.00	10.00	1.00
787 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	SHOW	5.0G	6.0G	7.0G	8.0G
6 AIRCRAFT	MEAN	2101.00	608.00	63.00	11.00
174 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**

ALL DATA THRU 6-82

MODEL A-4F BLUE ANGELS

11 AIRCRAFT 12562 HOURS

SOLO					
	PRACTICE	5.0G	6.0G	7.0G	8.0G
11 AIRCRAFT	MEAN	7310.00	1708.00	219.00	32.00
3143 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	SHOW	5.0G	6.0G	7.0G	8.0G
ll AIRCRAFT	MEAN	14004.00	4573.00	790.00	118.00
846 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
DI AMOND					
	PRACTICE	5.0G	6.0G	7.0G	8.0G
11 AIRCRAFT	MEAN	1183.00	285.00	51.00	7.00
6747 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	SHOW	5.0G	6.0G	7.0G	8.0G
10 AIRCRAFT	MEAN	2402.00	772.00	174.00	33.00
1826 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**

DATA FROM 7-81 THRU 6-82

MODEL A-3B

	1 AIRCRAFT	89 н	OURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
l AIRCRAFT	MEAN	11.21	.00	.00	.00
89 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL A-3B

80 AIRCRAFT 65970 HOURS NAVY ____ TRAINING 2.0G 2.5G 3.0G 3.5G _____ ____ ____ 80 AIRCRAFT MEAN 709.66 173.40 50.86 7.79 57175 HOURS STD DEV 403.62 113.83 37.07 9.66 SKEWNESS 1.61 .89 .93 2.63 COMBAT 2.0G 2.5G 3.0G 3.5G 25 AIRCRAFT MEAN 564.20 121.21 27.39 5.04 8795 HOURS STD DEV 249.09 75.35 25.68 6.67 SKEWNESS 1.11 .98 1.64 2.05 MARINE TRAINING 2.0G 2.5G 3.0G 3.5G 0 AIRCRAFT * MEAN 0 HOURS STD DEV * * SKEWNESS * * COMBAT 2.0G 2.5G 3.0G 3.5G 0 AIRCRAFT * * MEAN * * 0 HOURS STD DEV * * **SKEWNESS** * *

DATA FROM 7-81 THRU 6-82

M(DDI	3L	KA	-	3	В	

TRAINING 2.0G 2.5G 3.0G 3.5G 7 AIRCRAFT MEAN 82.83 26.03 4.73 .00 1427 HOURS STD DEV 41.69 13.10 2.38 .00 SKEWNESS .17 .17 .17 .1 COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * SKEWNESS * * * * * MARINE TRAINING 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * SKEWNESS * * * * * O HOURS STD DEV * * * * * SKEWNESS * * * * * O HOURS STD DEV * * * * * O HOURS STD DEV * * * * * SKEWNESS * * * * * * O HOURS STD DEV * * * * * * SKEWNESS * * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * * SKEWNESS * * * * * * O HOURS STD DEV * * * * * * SKEWNESS * * * * * * * O HOURS STD DEV * * * * * * O HOURS STD DEV * * * * * * SKEWNESS * * * * * * *		7 AIRCRAFT	1427	HOURS		
7 AIRCRAFT MEAN 82.83 26.03 4.73 .00 1427 HOURS STD DEV 41.69 13.10 2.38 .00 SKEWNESS .17 .17 .17 .17 .1 COMBAT 2.0G 2.5G 3.0G 3.5G 0 AIRCRAFT MEAN * * * * SKEWNESS * * * * * MARINE TRAINING 2.0G 2.5G 3.0G 3.5G 0 AIRCRAFT MEAN * * * * SKEWNESS * * * * * COMBAT 4.69 13.10 2.38 .00 3.5G 3.5G 3.5G 3.6G 3.5G 0 AIRCRAFT MEAN * * * * SKEWNESS * * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * *	NAVY					
1427 HOURS STD DEV 41.69 13.10 2.38 .00 SKEWNESS .17 .17 .17 .17 .1 COMBAT 2.0G 2.5G 3.0G 3.5G 0 AIRCRAFT MEAN * * * * 0 HOURS STD DEV * * * * * SKEWNESS * * * * * MARINE TRAINING 2.0G 2.5G 3.0G 3.5G 0 AIRCRAFT MEAN * * * * 0 HOURS STD DEV * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G SKEWNESS * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * *		TRAINING	2.0G		3.0G	3.5G
COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * * O HOURS STD DEV * * * * * SKEWNESS * * * * * MARINE TRAINING 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * * O HOURS STD DEV * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G SKEWNESS * * * * * * O HOURS STD DEV * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * * O HOURS STD DEV * * * * * *	7 AIRCRAFT	MEAN	82.83	26.03	4.73	.00
COMBAT 2.0G 2.5G 3.0G 3.5G 0 AIRCRAFT MEAN * * * * * 0 HOURS STD DEV * * * * * SKEWNESS * * * * * TRAINING 2.0G 2.5G 3.0G 3.5G	1427 HOURS	STD DEV	41.69	13.10	2.38	.00
0 AIRCRAFT MEAN * * * * * * 0 HOURS STD DEV * * * * * * SKEWNESS * * * * * * MARINE TRAINING 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * * SKEWNESS * * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * *		SKEWNESS	.17	.17	.17	I
0 HOURS STD DEV		COMBAT	2.0G	2.5G	3.0G	3.5G
SKEWNESS *	0 AIRCRAFT	MEAN	*	*	*	*
MARINE TRAINING 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * O HOURS STD DEV * * * * SKEWNESS * * * * COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * O HOURS STD DEV * * * *	0 HOURS	STD DEV	*	*	*	*
TRAINING 2.0G 2.5G 3.0G 3.5G 0 AIRCRAFT MEAN * * * * * 0 HOURS STD DEV * * * * * SKEWNESS * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G		SKEWNESS	*	*	*	*
0 AIRCRAFT MEAN * * * * * 0 HOURS STD DEV * * * * * SKEWNESS * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G O AIRCRAFT MEAN * * * * 0 HOURS STD DEV * * * *	MARINE					
0 HOURS STD DEV		TRAINING	2.0G	2.5G	3.0G	3.5G
SKEWNESS * * * * * COMBAT 2.0G 2.5G 3.0G 3.5G 3.0G 3.	0 AIRCRAFT	MEAN	*	*	*	*
COMBAT 2.0G 2.5G 3.0G 3.5G ** * * * * 0 AIRCRAFT MEAN * * * * 0 HOURS STD DEV * * * *	0 HOURS	STD DEV	*	*	*	*
0 AIRCRAFT MEAN * * * * * 0 HOURS STD DEV * * * *		SKEWNESS	*	*	*	*
0 HOURS STD DEV * * * *		COMBAT	2.0G	2.5G	3.0G	3.5G
0 HOURS STD DEV * * * *	0 AIRCRAFT	MEAN	*	*	*	*
			*	*	*	*
		SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL KA-3B

51 AIRCRA	FT !	51831	HOURS
-----------	------	-------	-------

NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
50 AIRCRAFT	MEAN	80.58	11.40	2.79	.61
48803 HOURS	STD DEV	136.77	16.88	4.25	1.67
	SKEWNESS	2.15	1.47	1.50	4.08
	COMBAT	2.0G	2.5G	3.0G	3.5G
11 AIRCRAFT	MEAN	172.44	30.93	5.69	.19
3028 HOURS	STD DEV	47.42	17.09	5.41	.59
	SKEWNESS	.51	1.14	.88	2.69
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL	A-4F

	30 AIRCRAFT	4889	HOURS		
NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
30 AIRCRAFT	MEAN	723.85	123.02	22.34	4.66
4889 HOURS	STD DEV	413.25	83.19	16.45	4.34
	SKEWNESS	1.09	1.60	2.08	3.68
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
	STD DEV	*	*	*	*
,	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL A-4F

	75 AIRCRAFT	68683	HOURS		
NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
75 AIRCRAFT	MEAN	576.64	90.24	12.14	3.08
58314 HOURS	STD DEV	335.81	86.70	28.74	11.76
	SKEWNESS	.65	1.34	3.82	3.95
	COMBAT	5.0G	6.0G	7.0G	8.0G
24 AIRCRAFT	MEAN	506.23	151.12	22.07	2.29
5983 HOURS	STD DEV	114.42	40.87	7.99	1.65
	SKEWNESS	20	.42	.25	1.22
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
13 AIRCRAFT	MEAN	748.95	136.85	15.68	3.56
4386 HOURS	STD DEV	240.08	61.79	12.93	4.76
	SKEWNESS	70	42	1.52	2.48
	СОМВАТ	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL	EA-4F

	3 AIRCRAFT	734	HOURS		
NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
3 AIRCRAFT	MEAN	41.31	5.09	.00	.00
734 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MO:	DEL	EA-	4 F

	4 AIRCRAFT	8609	HOURS		
NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
4 AIRCRAFT	MEAN	88.09	11.46	1.40	.00
8609 HOURS	STD DEV	122.33	17.06	1.65	.00
	SKEWNESS	02	.00	.03	I
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL TA-4F	
-------------	--

	14 AIRCRAFT	3160 H	IOURS	·	
NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
10 AIRCRAFT	MEAN	480.27	48.39	1.75	.23
2464 HOURS	STD DEV	239.23	34.56	3.27	.66
	SKEWNESS	1.55	1.77	2.42	2.54
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
4 AIRCRAFT	MEAN	527.92	10.29	.00	.00
695 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	СОМВАТ	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL TA-4F

166 AIRCRAFT 205555 HOURS

NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
144 AIRCRAFT	MEAN	209.37	28.44	2.11	.32
164971 HOURS	STD DEV	227.82	68.07	4.15	1.06
	SKEWNESS	1.68	7.50	3.31	4.31
	COMBAT	5.0G	6.0G	7.0G	8.0G
8 AIRCRAFT	MEAN	564.76	58.22	3.34	.73
2158 HOURS	STD DEV	149.00	21.08	2.38	.52
,	SKEWNESS	38	64	.97	.38
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
43 AIRCRAFT	MEAN	634.60	75.33	6.17	.73
38426 HOURS	STD DEV	428.48	95.87	11.35	2.11
	SKEWNESS	1.40	4.29	4.25	5.06
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL TA-4J

	257 AIRCRAFT	88865	HOURS		
NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
257 AIRCRAFT	MEAN	346.60	30.19	3.92	.59
88865 HOURS	STD DEV	252.31	40.91	12.81	2.68
	SKEWNESS	4.00	4.18	9.56	10.44
	СОМВАТ	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
•	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G 	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL TA-4J

379 AIRCRAFT 1049443 HOURS

NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
377 AIRCRAFT	MEAN	293.50	28.15	3.42	.62
1034587 HOURS	STD DEV	308.74	51.51	9.47	3.00
	SKEWNESS	2.94	3.31	3.97	9.05
	СОМВАТ	E 00	6.00	7.00	0.00
	COMBAT	5.0G 	6.UG	7.0G 	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
24 AIRCRAFT	MEAN	186.24	10.83	.48	.14
14856 HOURS	STD DEV	67.92	9.32	.76	.34
	SKEWNESS	1.21	1.63	2.26	2.40
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL A-4M

	79 AIRCRAFT	10656 Н	OURS		
NAVY 	TRAINING	5.0G	6.0G	7.0G	8.0G
18 AIRCRAFT	MEAN	352.96	27.31	3.10	.93
881 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
71 AIRCRAFT	MEAN	607.63	56.03	7.64	4.80
9775 HOURS	STD DEV	531.84	69.51	7.52	7.05
	SKEWNESS	6.52	6.02	4.44	5.96
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL A-4M

142 AIRCRAFT 122590 HOURS

NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
32 AIRCRAFT	MEAN	944.00	130.73	23.73	2.44
7224 HOURS	STD DEV	471.57	171.73	37.17	2.63
	SKEWNESS	2.04	4.12	4.24	2.26
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
136 AIRCRAFT	MEAN	457.72	46.04	7.22	1.56
115366 HOURS	STD DEV	307.92	51.09	10.69	3.81
	SKEWNESS	2.41	3.30	2.35	3.71
	СОМВАТ	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL	EA-6A

	18 AIRCRAFT	3709	HOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
18 AIRCRAFT	MEAN	172.76	19.61	1.17	.30
3709 HOURS	STD DEV	88.68	15.57	1.02	.51
	SKEWNESS	.89	2.36	1.82	3.35
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL E	SA-6A
---------	-------

25 AIRCRAFT 35874 HOURS NAVY TRAINING 4.0G 5.0G 6.0G 7.0G 18 AIRCRAFT MEAN 99.08 13.02 .70 .14 **7283 HOURS** STD DEV 118.39 21.29 1.26 .37 **SKEWNESS** 1.58 2.68 2.22 3.42 COMBAT 4.0G 5.0G 6.0G 7.0G 0 AIRCRAFT MEAN * 0 HOURS STD DEV * * **SKEWNESS** MARINE 4.0G TRAINING 5.0G 6.0G 7.0G 22 AIRCRAFT MEAN 53.51 4.45 .34 .00 28153 HOURS STD DEV 39.89 4.64 .61 .19 **SKEWNESS** .97 1.53 .83 4.37 COMBAT 4.0G 5.0G 6.0G 7.0G 5 AIRCRAFT MEAN 10.56 1.51 .00 .00 438 HOURS ** STD DEV ** **

**

**

**

**

SKEWNESS

DATA FROM 7-81 THRU 6-82

MODEL	EA-6B

	67 AIRCRAFT	21706 F	iours		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
60 AIRCRAFT	MEAN	152.13	21.99	1.74	.45
17837 HOURS	STD DEV	89.37	25.44	3.52	.97
	SKEWNESS	1.92	5.28	4.23	3.88
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
14 AIRCRAFT	MEAN	243.97	24.29	2.20	.18
3869 HOURS	STD DEV	98.86	11.74	2.07	.52
	SKEWNESS	.85	.82	1.56	3.16
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL	EA-6B

85 AIRCRAFT 144770 HOURS

					·
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
83 AIRCRAFT	MEAN	137.48	18.56	1.40	.29
130915 HOURS	STD DEV	100.41	22.81	3.41	.85
	SKEWNESS	1.33	2.35	2.62	2.88
	COMBAT	4.0G 	5.0G	6.0G	7.0G
l AIRCRAFT	MEAN	140.85	.00	.00	.00
7 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
14 AIRCRAFT	MEAN	191.96	16.61	1.19	.41
13848 HOURS	STD DEV	81.17	10.63	2.46	1.05
	SKEWNESS	.17	.68	1.46	2.48
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL KA-6D

51 AIRCRAFT 13247 HOURS NAVY TRAINING 4.0G 5.0G 6.0G 7.0G --------____ ____ ------.05 51 AIRCRAFT MEAN 30.38 2.50 .27 13247 HOURS STD DEV 40.65 3.18 1.10 .83 4.06 6.92 SKEWNESS 4.62 2.23 COMBAT 4.0G 5.0G 6.0G 7.0G MEAN 0 AIRCRAFT * 0 HOURS STD DEV SKEWNESS MARINE TRAINING 4.0G 5.0G 6.0G 7.0G * * O AIRCRAFT MEAN * 0 HOURS STD DEV * * * * * SKEWNESS COMBAT 4.0G 5.0G 6.0G 7.0G ____ ----____ * * 0 AIRCRAFT MEAN STD DEV 0 HOURS

*

SKEWNESS

*

*

*

ALL DATA THRU 6-82

MODEL KA-6D

77 AIRCRAFT 138593 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
77 AIRCRAFT	MEAN	26.63	2.42	.39	.12
130138 HOURS	STD DEV	61.78	4.85	1.19	.66
	SKEWNESS	5.11	3.45	2.34	4.80
	COMBAT	4.0G	5.0G	6.0G	7.0G
33 AIRCRAFT	MEAN	22.59	3.75	.87	.00
8455 HOURS	STD DEV	16.38	4.20	1.72	.00
	SKEWNESS	1.05	2.39	3.51	I
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL A-6E

	218 AIRCRAFT	55944	HOURS		
NAVY					
	TRAINING	4.0G		6.0G	7.0G
167 AIRCRAFT	MEAN	891.99	200.86	25.15	2.48
39211 HOURS	STD DEV	324.47	126.55	19.97	3.77
	SKEWNESS	2.82	4.67	2.31	4.00
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G		6.0G	7.0G
66 AIRCRAFT	MEAN	1462.67	356.89	48.62	4.27
16733 HOURS	STD DEV	398.33	162.68	33.57	5.38
	SKEWNESS	.60	3.08	3.30	3.58
	СОМВАТ	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL A-6E

356 AIRCRAFT 425430 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
326 AIRCRAFT	MEAN	1031.53	237.16	26.13	2.84
316753 HOURS	STD DEV	431.78	146.62	25.28	4.03
	SKEWNESS	.80	1.28	2.07	2.43
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
113 AIRCRAFT	MEAN	863.27	177.05	23.86	2.93
108677 HOURS	STD DEV	381.78	122.79	26.31	4.51
	SKEWNESS	.76	1.59	1.73	2.18
	СОМВАТ	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL A-7A

	2 AIRCRAFT	151	HOURS		
NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
2 AIRCRAFT	MEAN	1111.69	360.13	.00	.00
151 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	СОМВАТ	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL A-7A

194 AIRCRAFT 318148 HOURS

NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
194 AIRCRAFT	MEAN	1061.53	244.00	29.11	2.70
253473 HOURS	STD DEV	467.77	169.18	37.17	4.61
	SKEWNESS	.35	1.93	4.45	3.59
	COMBAT	5.0G	6.0G	7.0G	8.0G
133 AIRCRAFT	MEAN	765.97	242.17	32.86	2.62
64675 HOURS	STD DEV	157.84	77.57	15.90	2.44
	SKEWNESS	.21	1.61	.86	1.77
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL A-7B

65 AIRCRAFT 14288 HOURS

NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
65 AIRCRAFT	MEAN	1319.83	299.11	29.56	2.07
14288 HOURS	STD DEV	309.13	128.68	25.25	2.29
	SKEWNESS	.65	1.73	3.09	2.30
	COMBAT	5.0G 	6.0G 	7.0G 	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMPA	5.00	6.00	7.00	0.00
	COMBAT	5.0G 	6.0G 	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL A-7B

122 AIRCRAFT 153950 HOURS

NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
121 AIRCRAFT	MEAN	1083.11	294.52	39.29	6.58
145131 HOURS	STD DEV	375.19	167.16	49.83	13.39
	SKEWNESS	.81	1.42	2.17	3.44
	COMBAT	5.0G	6.0G	7.0G	8.0G
28 AIRCRAFT	MEAN	1297.37	434.41	59.01	4.19
8820 HOURS	STD DEV	349.87	119.17	33.47	4.66
	SKEWNESS	.14	.83	2.97	3.53
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL A-7C

	5 AIRCRAFT	736	HOURS		
NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
5 AIRCRAFT	MEAN	261.41	46.41	1.21	.00
736 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL A-7C

NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
46 AIRCRAFT	MEAN	924.65	181.18	20.90	2.83
40700 HOURS	STD DEV	711.68	195.95	42.53	6.48
	SKEWNESS	.62	1.85	3.57	3.98
	COMBAT	5.0G	6.0G	7.0G	8.0G
22 AIRCRAFT	MEAN	660.69			2 11
	STD DEV				
, oo , noons	SKEWNESS				
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL	TA-7C
-------	-------

	43 AIRCRAFT	11348	HOURS		
NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
43 AIRCRAFT	MEAN	766.43	87.56	6.18	3.51
11348 HOURS	STD DEV	352.18	49.68	8.94	8.54
	SKEWNESS	.57	1.08	4.97	5.77
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
	STD DEV	*			*
o nocks	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL TA-7C

59 AIRCRAFT 48295 HOURS

NAVY					
an an an	TRAINING	5.0G	6.0G	7.0G	8.0G
59 AIRCRAFT	MEAN	1048.29	175.94	11.18	1.85
48295 HOURS	STD DEV	599.70	133.25	16.46	6.46
	SKEWNESS	57	.17	2.47	4.24
,	СОМВАТ	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE		5.00			
	TRAINING	5.0G 	6.0G 	7.0G 	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL A-7E

	312 AIRCRAFT	96974	HOURS		
NAVY					
000 000 000	TRAINING	5.0G	6.0G	7.0G	8.0G
312 AIRCRAFT	MEAN	578.89	83.38	7.44	1.63
96974 HOURS	STD DEV	287.28	67.11	9.70	3.43
	SKEWNESS	2.02	2.80	3.85	4.63
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*			*
0 AIRCRAFI 0 HOURS	STD DEV	*	*	*	*
0 Hooks	SKEWNESS	*	*	*	*
	CCHMMUNG	**	**	••	••

ALL DATA THRU 6-82

MODEL A-7E

462 AIRCRAFT 808453 HOURS

NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
462 AIRCRAFT	MEAN	643.62	97.48	7.29	1.25
800285 HOURS	STD DEV	356.35	95.61	16.51	3.30
	SKEWNESS	1.75	3.75	10.00	3.89
	COMBAT	5.0G	6.0G	7.ÓG	8.0G
37 AIRCRAFT	MEAN	315.03	61.92	4.84	.68
8168 HOURS	STD DEV	60.51	19.82	2.91	1.06
	SKEWNESS	.04	.26	1.67	4.35
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

	5 AIRCRAFT	956 H	OURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
5 AIRCRAFT	MEAN	68.94	3.18	.76	.00
956 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G 	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G 	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL C-2A

	16 AIRCRAFT	58214	HOURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
16 AIRCRAFT	MEAN	44.59	12.31	4.90	1.22
58214 HOURS	STD DEV	58.53	24.93	12.14	3.52
	SKEWNESS	2.11	2.31	2.15	1.94
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

	4 AIRCRAFT	143	HOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
4 AIRCRAFT	MEAN	411.70	89.25	7.92	.00
143 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	СОМВАТ	4.0G	5.0G	6.0G	7.0G
	MEAN	*		*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL QF-4B

	13 AIRCRAFT	1319 1	HOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
13 AIRCRAFT	MEAN	795.63	240.41	53.93	15.60
1319 HOURS	STD DEV	183.65	87.58	14.30	5.47
	SKEWNESS	2.08	2.67	.76	.21
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*

0 HOURS STD DEV

SKEWNESS

DATA FROM 7-81 THRU 6-82

MODEL	RF-4B

	20 AIRCRAFT	4411	HOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
13 AIRCRAFT	MEAN	1993.41	748.81	191.45	25.69
952 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
16 AIRCRAFT	MEAN	1131.66	418.08	85.75	17.52
3459 HOURS	STD DEV	222.88	104.77	26.98	6.61
	SKEWNESS	25	.48	.38	.61

*

0 AIRCRAFT

0 HOURS

MEAN

STD DEV

SKEWNESS

COMBAT 4.0G 5.0G 6.0G 7.0G

*

*

*

ALL DATA THRU 6-82

MODEL RF-4B

46 AIRCRAFT 88587 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
15 AIRCRAFT	MEAN	1957.18	734.76	187.67	25.16
1041 HOURS	STD DEV	336.02	134.24	42.52	6.90
	SKEWNESS	40	51	00	.36
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
46 AIRCRAFT	MEAN	469.92	126.25	30.13	7.03
79531 HOURS	STD DEV	341.55	109.31	32.83	11.50
	SKEWNESS	.41	.79	1.29	2.81
	COMPA	4 00	F 00	c 00	7.00
	COMBAT	4.0G 	5.0G	6.0G	7.0G
16 AIRCRAFT	MEAN	1087.24	210.75	41.81	8.94
8015 HOURS	STD DEV	405.94	78.46	26.06	5.37
	SKEWNESS	1.58	1.80	2.18	1.10

DATA FROM 7-81 THRU 6-82

MODEL F-4J

105 AIRCRAFT 14861 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
75 AIRCRAFT	MEAN	1494.69	418.08	67.31	7.70
6262 HOURS	STD DEV	441.97	150.01	34.81	9.67
	SKEWNESS	1.88	1.32	2.13	4.14
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
62 AIRCRAFT	MEAN	3738.81	1066.17	142.75	11.54
8599 HOURS	STD DEV	744.43	263.34	44.01	7.66
	SKEWNESS	.09	.07	.62	1.77
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL F-4J

470 AIRCRAFT 777631 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
450 AIRCRAFT	MEAN	2745.44	1023.71	298.62	66.81
470489 HOURS	STD DEV	1667.70	782.73	309.67	93.87
	SKEWNESS	.92	.99	1.64	2.49
	COMBAT	4.0G	5.0G	6.0G	7.0G
177 AIRCRAFT	MEAN	1115.45	457.87	137.67	34.53
53574 HOURS	STD DEV	340.65	157.45	64.45	36.91
	SKEWNESS	1.84	2.86	2.68	4.38
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
279 AIRCRAFT	MEAN	4234.87	1529.99	434.29	112.66
243638 HOURS	STD DEV	1494.70	624.56	277.85	108.04
	SKEWNESS	1.08	1.13	1.54	2.11
	COMPAR	4 00	5 00	c 02	
	COMBAT	4.0G	5.0G	6.0G	7.0G
50 AIRCRAFT	MEAN	2807.54	1311.42	412.74	76.82
9931 HOURS	STD DEV	619.72	264.73	169.96	47.34
	SKEWNESS	2.57	2.24	1.89	1.61

DATA FROM 7-81 THRU 6-82

MODEL EF-4J

	1 AIRCRAFT	91	HOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
l AIRCRAFT	MEAN	350.49	.00	.00	.00
91 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL EF-4J

	2 AIRCRAFT	532 H	IOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
2 AIRCRAFT	MEAN	413.72	64.10	10.06	.00
532 HOURS	STD DEV	8.34	.21	1.78	.00
	SKEWNESS	.44	44	.44	I
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL F-4N

111 AIRCRAFT 14605 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
85 AIRCRAFT	MEAN	2318.35	828.33	184.15	27.31
9373 HOURS	STD DEV	712.11	267.55	62.48	17.36
	SKEWNESS	.91	1.21	1.11	3.71
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
37 AIRCRAFT	MEAN	4348.85	1311.49	204.95	15.70
5233 HOURS	STD DEV	472.61	187.43	34.01	8.15
	SKEWNESS	1.12	.64	.37	2.44
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	 *	*	*
0 HOURS	STD DEV	*	*	*	*
0 1100110	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL F-4N

216 AIRCRAFT 144093 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
178 AIRCRAFT	MEAN	2958.86	1234.77	340.36	60.91
93512 HOURS	STD DEV	973.16	451.18	153.58	39.39
	SKEWNESS	1.77	1.34	1.03	1.68
	COMBAT	4.0G	5.0G	6.0G	7.0G
7 AIRCRAFT	MEAN	1282.91	537.08	162.76	35.94
189 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
80 AIRCRAFT	MEAN	3973.98	1338.40	285.08	41.12
50392 HOURS	STD DEV	845.73	408.11	169.12	40.91
	SKEWNESS	1.48	2.10	2.32	2.41
	СОМВАТ	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL F-4S

157 AIRCRAFT 28912 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
73 AIRCRAFT	MEAN	3038.33	1229.49	279.50	38.54
13984 HOURS	STD DEV	818.15	352.88	91.47	20.16
	SKEWNESS	.53	.65	1.74	3.39
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
85 AIRCRAFT	MEAN	3356.52	987.41	150.73	14.28
14928 HOURS	STD DEV	499.33	183.24	47.94	11.77
	SKEWNESS	.18	.33	2.19	5.41
	СОМВАТ	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL F-4S

167 AIRCRAFT 67653 HOURS

173 T777					
NAVY 					
	TRAINING	4.0G	5.0G	6.0G	7.0G
80 AIRCRAFT	MEAN	3268.87	1302.93	313.65	46.97
24669 HOURS	STD DEV	1004.20	447.85	142.45	33.33
	SKEWNESS	.57	1.06	2.46	3.02
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
91 AIRCRAFT	MEAN	3863.58	1218.65	207.64	24.04
42984 HOURS	STD DEV	631.31	339.20	110.17	26.05
	SKEWNESS	.29	1.83	3.10	4.43
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL RF-8G

21 AIRCRAFT 4119 HOURS NAVY TRAINING 4.0G 5.0G 6.0G 7.0G ____ ----____ 21 AIRCRAFT MEAN 581.10 179.06 50.43 6.62 4119 HOURS STD DEV 291.73 113.24 38.81 11.19 SKEWNESS .90 1.21 1.74 2.59 COMBAT 4.0G 5.0G 6.0G 7.0G 0 AIRCRAFT MEAN * * 0 HOURS STD DEV **SKEWNESS** MARINE TRAINING 4.0G 5.0G 6.0G 7.0G * * 0 AIRCRAFT MEAN 0 HOURS STD DEV * **SKEWNESS**

AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

4.0G 5.0G 6.0G

7.0G

COMBAT

0

ALL DATA THRU 6-82

MODEL RF-8G

54	AIRCRAFT	62192	HOURS
<u> </u>	WIIICHUI I	02172	11001/2

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
54 AIRCRAFT	MEAN	419.79	122.89	27.40	4.23
61000 HOURS	STD DEV	360.72	123.20	30.10	8.69
	SKEWNESS	1.01	1.19	1.50	3.68
	COMBAT	4.0G	5.0G	6.0G	7.0G
11 AIRCRAFT	MEAN	1481.32	391.60	63.37	8.37
1192 HOURS	STD DEV	387.16	90.25	26.29	5.98
	SKEWNESS	1.13	1.89	1.75	1.30
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL DF-8J

	0 AIRCRAFT	0 H	OURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL DF-8J

	5 AIRCRAFT	1734	HOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
5 AIRCRAFT	MEAN	809.72	190.33	34.35	5.72
1734 HOURS	STD DEV	267.49	60.42	22.29	5.66
	SKEWNESS	93	-1.12	.85	1.02
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

1	OM	D	Ε.	L	P	-	3	A	

	92 AIRCRAFT	30196 н	OURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
92 AIRCRAFT	MEAN	2.26	.14	.08	.00
30196 HOURS	STD DEV	3.24	.79	.73	.00
	SKEWNESS	3.53	7.57	9.38	I
	COMBAT	2.0G	2.5G	3.0G 	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G 	3.0G 	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL P-3A

150 AIRCRAFT 1135850 HOURS

NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
150 AIRCRAFT	MEAN	13.26	1.16	.15	.02
1046195 HOURS	STD DEV	56.51	3.98	1.30	.23
	SKEWNESS	8.35	5.93	8.87	6.65
	COMBAT	2.0G	2.5G	3.0G	3.5G
99 AIRCRAFT	MEAN	12.40	1.10	.09	.01
89654 HOURS	STD DEV	15.05	2.38	.41	.11
	SKEWNESS	2.81	2.41	3.95	9.74
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL	EP-3A

	3 AIRCRAFT	1071 H	ours		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
3 AIRCRAFT	MEAN	.00	.00	.00	.00
1071 HOURS	STD DEV	.00	.00	.00	.00
	SKEWNESS	I	I	I	I
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODE	L EP	-3A
------	------	-----

	3 AIRCRAFT	6013 HC	OURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
3 AIRCRAFT	MEAN	.51	.42	.14	.00
6013 HOURS	STD DEV	1.85	1.25	.42	.00
	SKEWNESS	.41	.39	.39	I
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

M	0	D	E	L	R	P	-	3	A	
					 			_		_

	4 AIRCRAFT	2304 HG	OURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
4 AIRCRAFT	MEAN	2.58	.64	.00	.00
2304 HOURS	STD DEV	1.72	.43	.00	.00
	SKEWNESS	20	20	I	I
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL RP-3A	L
-------------	---

4	AIRCRAFT	18829	HOURS
---	----------	-------	-------

NAVY					
NAVY	TRAINING	2.0G	2.5G	3.0G	3.5G
4 AIRCRAFT	MEAN	2.80	.27	.13	.00
18829 HOURS	STD DEV	5.51	.79	.39	.00
	SKEWNESS	.15	.11	.19	I
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL P-3B

	106 AIRCRAFT	60476 H	HOURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
106 AIRCRAFT	MEAN	3.40	.41	.08	.01
60476 HOURS	STD DEV	4.91	1.07	.25	.13
	SKEWNESS	3.10	5.60	4.62	10.05
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL P-3B

127 AIRCRAFT 1174643 HOURS

NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
127 AIRCRAFT	MEAN	7.21	.69	.11	.03
1087512 HOURS	STD DEV	25.30	3.41	.99	.51
	SKEWNESS	3.23	5.73	6.00	8.20
	COMPAR	2.00	2 50	2.00	2 50
	COMBAT	2.0G	2.5G 	3.0G 	3.5G
78 AIRCRAFT	MEAN	4.90	.44	.03	.01
87131 HOURS	STD DEV	5.51	.82	.15	.11
	SKEWNESS	.66	2.77	5.63	8.38
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0					
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL EP-3B

	3 AIRCRAFT	1909 но	ours		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
3 AIRCRAFT	MEAN	10.23	1.07	.55	.00
1909 HOURS	STD DEV	9.38	4.36	4.39	.00
	SKEWNESS	.85	.88	.91	I
	2017.7	0.00	0.50	2.00	2 50
	COMBAT	2.0G	2.5G 	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	00VD1 T	2.02	2 52	2.00	2 50
	COMBAT	2.0G 	2.5G 	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL 1	EP-3B
---------	-------

	3 AIRCRAFT	31815 HOURS				
NAVY						
	TRAINING	2.0G	2.5G	3.0G	3.5G	
3 AIRCRAFT	MEAN	2.34	.06	.02	.00	
23038 HOURS	STD DEV	3.88	1.53	1.53	.00	
	SKEWNESS	.92	.92	.94	I	
	COMBAT	2.0G	2.5G 	3.0G	3.5G	
2 AIRCRAFT	MEAN	3.95	.54	.00	.00	
8778 HOURS	STD DEV	4.89	.97		.00	
	SKEWNESS	26		I	I	
MARINE						
		2.0G	2.5G	3.0G	3.5G	
0 AIRCRAFT	MEAN	*	*	*	*	
0 HOURS	STD DEV	*	*	*	*	
	SKEWNESS	*	*	*	*	
	СОМВАТ	2.0G	2.5G	3.0G	3.5G	
0 AIRCRAFT	MEAN	*	*	*	*	
0 HOURS	STD DEV	*	*	*	*	
	SKEWNESS	*	*	*	*	

DATA FROM 7-81 THRU 6-82

MODEL P-3C

197 AIRCRAFT 115372 HOURS

NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
197 AIRCRAFT	MEAN	5.91	1.01	.32	.25
115372 HOURS	STD DEV	9.89	4.45	2.22	2.18
	SKEWNESS	3.09	8.47	8.31	8.72
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	TRAINING MEAN	2.0G 	2.5G 	3.0G 	3.5G
	MEAN	*	*	*	*
	MEAN STD DEV	* *	*	* *	*
	MEAN STD DEV	* *	*	* *	*
	MEAN STD DEV SKEWNESS	* * *	* * *	* * *	*
0 HOURS	MEAN STD DEV SKEWNESS COMBAT	* * 2.0G	* * * 2.5G	* * * 3.0G	* * * 3.5G

ALL DATA THRU 6-82

MOD	EL	P-	3C

221 AIRCRAFT 775887 HOURS

NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
221 AIRCRAFT	MEAN	3.22	.37	.08	.04
775552 HOURS	STD DEV	10.25	2.71	1.18	.90
	SKEWNESS	3.47	5.10	6.74	8.68
	COMBAT	2.0G	2.5G	3.0G	3.5G
2 AIRCRAFT	MEAN	.00	.00	.00	.00
335 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS		*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

M	IOE	EL	EP-	3E

	9 AIRCRAFT	5363 HC	OURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
9 AIRCRAFT	MEAN	2.61	.34	.15	.00
5363 HOURS	STD DEV	2.70	.98	.44	.00
	SKEWNESS	.70	1.81	2.15	I
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL EP-3E

	10 AIRCRAFT	56147 н	OURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
10 AIRCRAFT	MEAN	1.75	.13	.07	.00
56147 HOURS	STD DEV	1.30	.91	.82	.00
	SKEWNESS	98	1.79	2.49	I
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 11000100					
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	GOVENE	0.00			
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL ES-2D

	0 AIRCRAFT	r o	HOURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRA	FT MEAN	*	*	*	*
0 HOU	RS STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRA	FT MEAN	*	*	*	*
0 HOU	RS STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRA	FT MEAN	*	*	*	*
0 нои	RS STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRA	FT MEAN	*	*	*	*
0 нои	RS STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MO	DEL	ES-	2D

	7 AIRCRAFT	12105 но	OURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
7 AIRCRAFT	MEAN	5.27	.67	.20	.00
12105 HOURS	STD DEV	10.70	.98	.30	.00
	SKEWNESS	.88	.41	.03	I
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL S-3A

120 AIRCRAFT 40244 HOURS

NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
120 AIRCRAFT	MEAN	1224.22	473.80	171.54	52.44
40244 HOURS	STD DEV	411.71	184.50	79.80	26.54
	SKEWNESS	1.41	1.64	1.78	1.34
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL S-3A

178 AIRCRAFT 260513 HOURS

NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
178 AIRCRAFT	MEAN	1254.89	464.36	151.83	42.49
260513 HOURS	STD DEV	637.54	258.67	91.16	30.83
	SKEWNESS	1.35	1.01	.03	.09
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL T-2C

169	AIRCRAFT	70483	HOURS

NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
169 AIRCRAFT	MEAN	184.45	18.30	1.71	.60
70483 HOURS	STD DEV	234.39	31.54	3.18	1.87
	SKEWNESS	6.16	10.64	4.87	5.44
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE	TRAINING	5.0G	6.0G 	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL T-2C

215 AIRCRAFT 475875 HOURS

NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
215 AIRCRAFT	MEAN	144.88	15.77	1.89	.30
475875 HOURS	STD DEV	191.80	25.20	3.81	1.35
	SKEWNESS	2.04	4.07	2.79	3.76
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL T-28B

	13 AIRCRAFT	6617	HOURS		
NAVY					
	TRAINING	3.0G	4.0G	5.0G	6.0G
13 AIRCRAFT	MEAN	950.56	36.44	2.92	.16
6617 HOURS	STD DEV	901.75	19.45	1.67	.39
	SKEWNESS	2.23	.87	.07	2.73
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

1	MO	D)	EL	T-	2	8	В	

98 AIRCRAFT 505235 HOURS

NAVY					
	TRAINING	3.0G	4.0G	5.0G	6.0G
98 AIRCRAFT	MEAN	384.34	43.91	4.07	.32
505235 HOURS	STD DEV	649.81	107.66	20.57	2.27
	SKEWNESS	.72	2.05	4.76	5.16
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MO	DEL	\mathbf{T}^{-}	3	4C	

169 AIRCRAFT 127501 HOURS

NAVY					
	TRAINING	3.0G	4.0G	5.0G	6.0G
169 AIRCRAFT	MEAN	574.98	77.88	4.30	.38
127501 HOURS	STD DEV	162.63	37.62	5.35	1.03
	SKEWNESS	4.71	6.77	6.05	4.34
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL T-34C

179 AIRCRAFT 383736 HOURS

NAVY					
	TRAINING	3.0G	4.0G	5.0G	6.0G
179 AIRCRAFT	MEAN	591.44	82.67	4.53	.65
383736 HOURS	STD DEV	162.75	65.37	7.92	2.46
	SKEWNESS	3.63	7.86	4.07	5.06
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL	T-39D

•	5 AIRCRAFT	1269	HOURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
5 AIRCRAFT	MEAN	1199.99	80.75	7.90	.00
1269 HOURS	STD DEV	916.97	51.87	5.06	.00
	SKEWNESS	.50	.27	05	I
	COMBAT	2.0G	2 50	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	. *	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 x t DCD x mm	MEAN	*	*	*	*
0 AIRCRAFT 0 HOURS	MEAN STD DEV	*	*	*	*
U HOURS	STD DEV SKEWNESS	*	*	*	*
	SCHMMENS	••	••	••	

ALL DATA THRU 6-82

MODEL	T-39D
-------	-------

7 AIRCRAFT 11684 HOURS

NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
7 AIRCRAFT	MEAN	776.37	65.37	14.20	5.12
11684 HOURS	STD DEV	1210.42	182.22	50.48	21.84
	SKEWNESS	.31	1.65	1.72	1.73
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

	MOI	DEL	T-4	44A
--	-----	-----	-----	-----

	52 AIRCRAFT	38971 H	OURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
52 AIRCRAFT	MEAN	46.61	6.72	1.28	.14
38971 HOURS	STD DEV	46.52	21.15	5.11	.41
	SKEWNESS	5.01	6.59	6.55	3.74
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

60 AIRCRAFT 157817 HOURS

NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
60 AIRCRAFT	MEAN	31.27	3.24	.63	.11
157817 HOURS	STD DEV	29.70	11.83	3.65	.37
	SKEWNESS	3.99	6.81	6.91	2.29
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	2.0G	2.5G	3.0G	3.5G

0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL AV-8A

22 AIRCRAFT 1992 HOURS

MARINE					
	TRAINING	-1.5G	5G	.25G	2.5G
22 AIRCRAFT	MEAN	4.14	87.95	2797.95	15288.20
1992 HOURS	STD DEV	4.94	51.52	1497.34	2514.68
	SKEWNESS	3.69	3.00	2.39	.72
		3.5G	5.0G	7.0G	8.0G
22 AIRCRAFT	MEAN	7718.55	1339.06	11.07	.44
1992 HOURS	STD DEV	1214.81	238.29	7.17	.71
	SKEWNESS	.82	.51	2.09	4.02
MARINE					
	COMBAT	-1.5G	5G	.25G	2.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
		3.5G	5.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL AV-8A

96	AIRCRAFT	62924	HOURS
----	----------	-------	-------

MARINE					
	TRAINING	-1.5G	5G	.25G	2.5G
96 AIRCRAFT	MEAN	4.07	45.71	1361.05	11906.19
62924 HOURS	STD DEV	3.33	28.53	619.23	1937.76
	SKEWNESS	1.37	2.92	4.08	.16
		3.5G	5.0G	7.0G	8.0G
96 AIRCRAFT	MEAN	6382.86	1514.01	32.99	3.32
62924 HOURS	STD DEV	1182.66	349.61	20.72	2.66
	SKEWNESS	.32	13	2.06	1.52
MARINE					
	COMBAT	-1.5G	5G	.25G	2.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
		3.5G	5.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

DATA FROM 7-81 THRU 6-82

MODEL	TAV-8A

	4 AIRCRAFT	744	HOURS		
MARINE					
	TRAINING	-1.5G	5G	.25G	2.5G
4 AIRCRAFT	MEAN	1.39	8.23	356.23	7237.84
744 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
		3.5G	5.0G	7.0G	8.0G
4 AIRCRAFT	MEAN	3253.04	208.06	1.86	.00
744 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
MARINE					
	COMBAT	-1.5G 	5G	.25G	2.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
		3.5G	5.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA THRU 6-82

MODEL TAV-8A

	8 AIRCRAFT	5223	HOURS		
MARINE					
	TRAINING	-1.5G	5G	.25G	2.5G
8 AIRCRAFT	MEAN	1.61	11.85	404.73	8412.72
5223 HOURS	STD DEV	.90	6.59	70.89	873.45
	SKEWNESS	48	.39	13	.09
		3.5G 	5.0G	7.0G	8.0G
8 AIRCRAFT	MEAN	4101.97	621.44	2.88	.19
5223 HOURS	STD DEV	520.24	168.67	2.66	.43
	SKEWNESS	69	12	.65	1.78
MARINE					
	COMBAT	-1.5G 	5G	.25G	2.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
		3.5G	5.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*

SKEWNESS

THIS PAGE LEFT INTENTIONALLY BLANK

APPENDIX A

OUT-OF-SERVICE MODELS AND MODELS WHICH HAVE NOT REPORTED COUNTING ACCELEROMETER DATA DURING THE PREVIOUS 12 MONTHS

ALL DATA

MODEL F-4JBA

14 AIRCRAFT 8102 HOURS

	DI AMOND	6.0G 	7.0G	8.5G	10.0G
14 AIRCRAFT	MEAN	502.35	164.78	21.16	1.73
5418 HOURS	STD DEV	118.81	82.68	13.94	1.23
	SKEWNESS	.22	.78	.49	.53
	SOLO	6.0G	7.0G	8.5G	10.0G
10 AIRCRAFT	MEAN	2220 24	707 50	1/2 05	12.38
IU AIRCRAFT	MEAN	2220.24	797.59	143.00	12.30
2684 HOURS	STD DEV	573.11	298.17	95.53	18.68
	SKEWNESS	30	05	1.55	2.40
		6.0G	7.0G	8.5G	10.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
		6.0G	7.0G	8.5G	10.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL F-11ABA

12 AIRCRAFT 3744 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
12 AIRCRAFT	MEAN	5414.80	1826.99	520.71	188.84
3744 HOURS	STD DEV	2263.48	740.91	208.44	86.14
	SKEWNESS	39	65	79	37
-	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL F-11ABA

	11 AIRCRAFT	4400	HOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
11 AIRCRAFT	MEAN	740.74	192.71	12.43	3.88
4400 HOURS	STD DEV	217.97	62.76	7.33	7.05
	SKEWNESS	.19	.26	.95	2.32
	COMBAT	4.0G	5.0G	6.0G 	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL A-1H

	28 AIRCRAFT	7290	HOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
22 AIRCRAFT	MEAN	263.05	94.29	6.31	.00
374 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	COMBAT	4.0G	5.0G	6.0G	7.0G
28 AIRCRAFT	MEAN	322.42	89.29	14.84	.00
6916 HOURS	STD DEV	77.52	27.19	6.46	.00
	SKEWNESS	1.14	1.22	1.07	.00
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL A-1J

	4 AIRCRAFT	917	HOURS		
NAVY					
a no no us	TRAINING	4.0G	5.0G	6.0G	7.0G
l AIRCRAFT	MEAN	.00	.00	.00	.00
32 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	COMBAT	4.0G	5.0G	6.0G	7.0G
4 AIRCRAFT	MEAN	306.82	125.89	17.28	.00
885 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL EKA-3B

	20 AIRCRAFT	9742	HOURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
19 AIRCRAFT	MEAN	354.19	65.33	21.52	3.53
8334 HOURS	STD DEV	289.18	60.88	23.25	4.26
	SKEWNESS	.85	1.77	1.98	1.96
	COMBAT	2.0G	2.5G	3.0G	3.5G
5 AIRCRAFT	MEAN	99.38	6.56	.00	.00
1408 HOURS	STD DEV	52.68	9.15	.00	.00
	SKEWNESS	.71	1.36	.00	.00
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL A-4B

58	AIRCRAFT	23177	HOURS
----	----------	-------	-------

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
55 AIRCRAFT	MEAN	681.15	238.03	49.07	7.87
20376 HOURS	STD DEV	358.28	164.65	46.69	9.80
	SKEWNESS	.67	1.04	2.09	2.14
	СОМВАТ	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
8 AIRCRAFT	MEAN	268.45	64.34	10.94	.99
2800 HOURS	STD DEV	245.06	92.00	18.99	1.89
	SKEWNESS	.55	1.39	1.73	1.67
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 31000300	MERN	*	*	*	*
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	^	•	•	^

ALL DATA

MODEL TA-4B

	10 AIRCRAFT	3976	HOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
10 AIRCRAFT	MEAN	745.68	292.32	83.97	13.39
3976 HOURS	STD DEV	480.64	221.15	68.00	17.49
	SKEWNESS	03	.26	.92	1.49
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL A-4G

16 AIRCRAFT 15502 HOURS

NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
16 AIRCRAFT	MEAN	1978.65	316.40	36.62	5.30
15502 HOURS	STD DEV	491.41	110.99	15.52	4.06
	SKEWNESS	.10	04	.05	.84
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL TA-4G

	4 AIRCRAFT	4674	HOURS		
NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
4 AIRCRAFT	MEAN	780.06	90.24	7.31	.95
4674 HOURS	STD DEV	107.06	8.76	2.96	3.05
	SKEWNESS	.02	38	1.01	1.03
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
	STD DEV	*		*	*
o noons	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 AIRCRAFT 0 HOURS	MEAN STD DEV	*	*	*	*
O HOURS	אמת תופ	•	•	•	^

ALL DATA

MODEL A-5A

3	0 AIRCRAFT	11790	HOURS

NAVY					
	TRAINING	3.0G	4.0G	5.0G	6.0G
30 AIRCRAFT	MEAN	579.58	128.26	9.04	.89
11790 HOURS	STD DEV	487.22	42.19	4.68	1.00
	SKEWNESS	4.57	.57	.75	1.63
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL A-5B

	5 AIRCRAFT	985	HOURS		
NAVY					
	TRAINING	3.0G	4.0G	5.0G	6.0G
5 AIRCRAFT	MEAN	125.50	13.83	1.01	.00
985 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 11000100					
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL RA-5C

129 AIRCRAFT 160529 HOURS

NAVY					
	TRAINING	3.0G	4.0G	5.0G	6.0G
129 AIRCRAFT	MEAN	198.27	11.94	.88	.16
139664 HOURS	STD DEV	110.59	25.27	1.95	.65
	SKEWNESS	2.43	8.28	2.70	3.44
	COMBAT	3.0G	4.0G	5.0G	6.0G
94 AIRCRAFT	MEAN	931.07	99.95	13.46	.66
20865 HOURS	STD DEV	435.85	70.01	18.99	1.29
	SKEWNESS	3.15	3.41	6.42	3.66
MARINE					
	TRAINING	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL A-6A

416 AIRCRAFT 397673 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
386 AIRCRAFT	MEAN	1275.66	409.52	66.85	5.99
232860 HOURS	STD DEV	455.87	216.84	55.67	8.55
	SKEWNESS	.79	1.70	3.41	7.10
	COMBAT	4.0G	5.0G	6.0G	7.0G
197 AIRCRAFT	MEAN	1081.91	451.75	110.41	13.06
38369 HOURS	STD DEV	267.48	153.44	56.44	7.62
	SKEWNESS	4.34	4.62	3.33	2.05
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
195 AIRCRAFT	MEAN	915.95	227.30	31.57	2.79
100003 HOURS	STD DEV	350.99	133.51	28.49	4.27
	SKEWNESS	.54	1.19	2.32	3.04
	COMBAT	4.0G	5.0G	6.0G	7.0G
77 AIRCRAFT	MEAN	457.85	149.86	23.43	1.37
26440 HOURS	STD DEV	211.51	110.44	21.43	3.45
	SKEWNESS	1.11	2.92	3.29	7.09

ALL DATA

MODEL NA-6A

	8 AIRCRAFT	5393	HOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
8 AIRCRAFT	MEAN	106.87	20.74	4.05	1.08
5393 HOURS	STD DEV	92.22	26.43	5.59	1.46
	SKEWNESS	.62	.84	.74	.83
·	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL A-6B

18 AIRCRAFT 11964 HOURS

IAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
18 AIRCRAFT	MEAN	523.51	127.72	17.36	2.84
10043 HOURS	STD DEV	155.98	53.34	14.34	4.97
	SKEWNESS	98	27	.96	2.28
	COMBAT	4.0G	5.0G	6.0G	7.0G
10 AIRCRAFT	MEAN	301.71	91.54	9.41	1.92
1921 HOURS	STD DEV	101.45	55.09	7.42	2.85
	SKEWNESS	.63	1.27	1.77	2.18
IARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*

ALL DATA

MODEL A-6C

	12 AIRCRAFT	7282	HOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
12 AIRCRAFT	MEAN	960.17	311.66	15.27	.89
6983 HOURS	STD DEV	460.22	159.61	13.07	.77
	SKEWNESS	10	38	.37	.36
	COMBAT	4.0G	5.0G	6.0G	7.0G
2) I DCD) DM	MEAN	E01 02	202.66	E0 E0	0.70
299 HOURS	SID DEV		**		**
	SKEWNESS	**	**	**	**
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	4.0G	5.0G	6.0G	7.0G
			West 1970 1970 1970		
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL A-7H

	41 AIRCRAFT	460	HOURS		
NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
41 AIRCRAFT	MEAN	438.02	183.86	16.92	3.87
460 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	СОМВАТ	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	5.0G	6.0G	7.0G	8.0G
•				400 tale dan ap.	
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*

SKEWNESS * * * *

ALL DATA

MODEL KC-130F

	12 AIRCRAFT	17648 H	OURS		
NAVY					
utus dan tah	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
12 AIRCRAFT	MEAN	6.76	.42	.08	.00
17648 HOURS	STD DEV	5.79	.51	.22	.00
	SKEWNESS	38	.30	1.82	.00
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL AF-1E

21	AIRCRAFT	4527	HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
21 AIRCRAFT	MEAN	563.04	125.53	22.27	3.60
4527 HOURS	STD DEV	200.25	52.92	16.14	4.72
	SKEWNESS	.29	.61	1.63	2.00
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	GOVENE	4 00	- 0-		
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL F-4A

27 AIRCRAFT 17193 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
27 AIRCRAFT	MEAN	794.95	261.01	66.29	11.89
17193 HOURS	STD DEV	275.55	127.26	42.65	8.70
	SKEWNESS	.09	.33	.71	1.19
	COMBAT	4.0G	5.0G	6.0G	. 7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL TF-4A

	4 AIRCRAFT	433	HOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
4 AIRCRAFT	MEAN	135.48	23.72	3.32	.00
433 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL F-4B

611 AIRCRAFT 871204 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
573 AIRCRAFT	MEAN	1918.80	666.05	190.93	46.54
452278 HOURS	STD DEV	1116.51	507.34	211.25	75.16
	SKEWNESS	1.84	2.14	3.28	5.39
	COMBAT	4.0G	5.0G	6.0G	7.0G
291 AIRCRAFT	MEAN	1137.73	405.31	129.20	31.32
108405 HOURS	STD DEV	372.90	132.70	67.31	31.02
	SKEWNESS	2.98	1.94	4.10	8.73
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
336 AIRCRAFT	MEAN	2308.28	749.06	184.98	40.80
203787 HOURS	STD DEV	1197.25	522.21	193.15	60.69
	SKEWNESS	1.25	1.61	2.08	3.35
	COMBAT	4.0G	5.0G	6.0G	7.0G
226 AIRCRAFT	MEAN	2221.18	864.39	225.90	47.53
106735 HOURS	STD DEV	695.10	341.03	155.65	51.23
	SKEWNESS	1.47	1.22	2.23	4.40

ALL DATA

MODEL F-67

46	AIRCRAFT	17986	HOURS
Ŧ 0	WINCKUL I	T/200	DUURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
29 AIRCRAFT	MEAN	190.91	25.88	1.99	.20
12399 HOURS	STD DEV	143.14	29.94	2.18	.75
	SKEWNESS	2.41	2.60	1.96	2.92
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
26 AIRCRAFT	MEAN	147.15	17.74	.53	.00
5587 HOURS	STD DEV	32.97	7.42	.68	.00
	SKEWNESS	1.24	.80	2.11	.00
	СОМВАТ	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL F-8A

33043	HOURS
	33043

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
48 AIRCRAFT	MEAN	678.64	171.70	32.28	5.44
33043 HOURS	STD DEV	330.20	100.28	22.83	4.33
	SKEWNESS	.32	.50	.75	1.38
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL RF-8A

	28 AIRCRAFT	20290	HOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
23 AIRCRAFT	MEAN	317.32	80.22	13.37	2.05
15203 HOURS	STD DEV	120.58	36.11	7.56	1.88
	SKEWNESS	.56	.52	.61	1.90
	COMBAT	4.0G	5.0G	6.0G	7.0G
4 AIRCRAFT	MEAN	221.00	34.00	5.73	5.73
355 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
10 AIRCRAFT	MEAN	151.04	28.24	4.41	.56
4726 HOURS	STD DEV	49.30	13.23	3.03	.99
	SKEWNESS	68	.20	.42	1.68
	COMBAT	4.0G	5.0G	6.0G	7.0G
1 AIRCRAFT	MEAN	.00	.00	.00	.00
6 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**

ALL DATA

MODEL TF-8A

30 7	AIRCRAFT	4924	HOURS
------	----------	------	-------

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
30 AIRCRAFT	MEAN	1274.72	393.67	82.63	14.88
4924 HOURS	STD DEV	354.70	139.02	33.41	6.09
	SKEWNESS	.88	2.10	2.48	.98
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL F-8B

53	AIRCRAFT	40015	HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
46 AIRCRAFT	MEAN	813.00	203.68	34.52	3.65
29272 HOURS	STD DEV	316.12	100.90	23.43	3.94
	SKEWNESS	.99	1.13	1.73	2.98
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
36 AIRCRAFT	MEAN	778.09	148.63	19.24	2.49
10743 HOURS	STD DEV	188.70	53.00	9.18	2.34
	SKEWNESS	1.26	1.68	1.46	2.06
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL F-8C

87	AIRCRAFT	76054	HOURS
----	----------	-------	-------

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
78 AIRCRAFT	MEAN	875.42	217.67	38.78	4.89
53012 HOURS	STD DEV	534.39	164.74	37.06	6.76
	SKEWNESS	1.20	1.14	1.60	2.57
	COMBAT	4.0G	5.0G	6.0G	7.0G
ll AIRCRAFT	MEAN	848.92	194.84	49.77	6.46
1689 HOURS	STD DEV	575.01	119.04	27.36	6.78
	SKEWNESS	.22	.30	.17	1.45
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
37 AIRCRAFT	MEAN	1217.83	346.89	67.32	10.17
20851 HOURS	STD DEV	370.14	107.60	22.36	4.73
	SKEWNESS	1.83	1.83	1.66	.05
	COMBAT	4.0G	5.0G	6.0G	7.0G
ll AIRCRAFT	MEAN	748.69	333.97	61.52	9.71
502 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**

ALL DATA

MODEL F-8D

101 AIRCRAFT 70988 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
93 AIRCRAFT	MEAN	1176.54	326.40	68.29	11.47
49588 HOURS	STD DEV	490.92	154.19	37.61	7.70
	SKEWNESS	.55	.48	.72	1.25
	COMBAT	4.0G	5.0G	6.0G	7.0G
15 AIRCRAFT	MEAN	1380.67	394.15	107.24	22.87
1060 HOURS	STD DEV	468.87	79.59	21.81	6.83
	SKEWNESS	2.59	.29	.19	.71
IARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
46 AIRCRAFT	MEAN	826.64	216.72	45.39	8.03
19583 HOURS	STD DEV	398.11	118.51	30.75	5.85
	SKEWNESS	.83	.90	1.13	1.50
	COMBAT	4.0G	5.0G	6.0G	7.0G
ll AIRCRAFT	MEAN	546.18	88.42	8.42	4.32
758 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**

ALL DATA

MODEL F-8E

248 AIRCRAFT 198601 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
243 AIRCRAFT	MEAN	1994.36	610.43	131.38	19.66
125946 HOURS	STD DEV	717.23	205.58	53.09	11.45
	SKEWNESS	1.87	1.50	1.62	2.23
	COMBAT	4.0G	5.0G	6.0G	
103 AIRCRAFT	MEAN	1074.97	372.62	92.68	17.22
27936 HOURS	STD DEV	193.19	101.22	41.20	15.20
	SKEWNESS	.06	.97	3.20	5.50
MARINE					
	TRAINING	4.0G	5.0G	6.0G	
88 AIRCRAFT	MEAN	1551.79	453.60	92.16	15.17
26217 HOURS	STD DEV	451.22	138.34	35.57	9.01
	SKEWNESS	.49	.04	.50	1.61
	COMBAT	4.0G 	5.0G	6.0G	7.0G
52 AIRCRAFT	MEAN	1334.99	460.44	118.91	19.35
18501 HOURS	STD DEV	373.38	123.04	28.68	8.02
	SKEWNESS	3.39	.45	.60	1.58

ALL DATA

MODEL DF-8F

	13 AIRCRAFT	9599	HOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
13 AIRCRAFT	MEAN	405.48	91.31	11.23	.82
9599 HOURS	STD DEV	271.17	85.23	15.41	1.65
	SKEWNESS	.49	.76	1.93	1.35
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL F-8H

87 AIRCRAFT 85490 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
87 AIRCRAFT	MEAN	1664.03	519.64	101.80	13.61
72270 HOURS	STD DEV	557.82	191.35	46.31	9.47
	SKEWNESS	.36	.78	.74	1.31
	COMBAT	4.0G	5.0G	6.0G	7.0G
45 AIRCRAFT	MEAN	711.67	197.56	41.43	6.17
13220 HOURS	STD DEV	254.48	82.47	19.81	4.49
	SKEWNESS	2.35	2.77	2.28	1.32
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL F-8J

134 AIRCRAFT 128071 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
134 AIRCRAFT	MEAN	2136.29	647.37	121.76	15.13
100977 HOURS	STD DEV	726.37	267.49	63.60	18.24
	SKEWNESS	.89	.70	1.18	6.90
	COMBAT	4.0G	5.0G	6.0G	7.0G
93 AIRCRAFT	MEAN	769.47	258.14	55.15	8.35
27094 HOURS	STD DEV	318.22	138.06	35.52	9.12
	SKEWNESS	2.48	2.94	2.90	3.75
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	. *	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL F-8K

74 AIRCRAFT 41773 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
74 AIRCRAFT	MEAN	1659.73	518.96	111.98	13.66
41660 HOURS	STD DEV	745.33	247.92	60.18	9.15
	SKEWNESS	1.63	2.37	3.61	1.41
	COMBAT	4.0G	5.0G	6.0G	7.0G
3 AIRCRAFT	MEAN	4194.50	1576.92	208.63	24.88
113 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL F-8L

36 AIRCR	RAFT 985	56 HOURS
----------	----------	----------

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
36 AIRCRAFT	MEAN	1711.41	498.06	122.95	19.19
9856 HOURS	STD DEV	427.64	204.07	66.52	13.14
	SKEWNESS	.81	.84	1.31	1.17
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE			·		
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MC	DEL	DF-	-8L

	5 AIRCRAFT	2081	HOURS		
NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
5 AIRCRAFT	MEAN	657.85	168.35	25.46	2.33
2081 HOURS	STD DEV	217.60	54.39	8.30	2.57
	SKEWNESS	29	40	08	.77
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	4.0G	5.0G	6.0G	7.0G
			now that the same		
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL EF-10B

	16 AIRCRAFT	9853 H	OURS		
NAVY					
	TRAINING	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	mna tatawa	2 00	4 00	F 00	6.00
	TRAINING	3.0G	4.0G 	5.0G	6.0G
14 AIRCRAFT	MEAN	16.24	.00	.00	.00
7526 HOURS	STD DEV	10.06	.00	.00	.00
	SKEWNESS	59	.00	.00	.00
	COMBAT	3.0G	4.0G	5.0G	6.0G
10 AIRCRAFT	MEAN	45.06	2.22	.00	.00
2327 HOURS	STD DEV	20.68	4.09	.00	.00
	SKEWNESS	2.16	2.52	.00	.00

ALL DATA

MODEL F-11A

36 AIRCRAFT 22538 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
36 AIRCRAFT	MEAN	2796.39	593.37	80.02	10.38
22538 HOURS	STD DEV	916.87	259.16	60.36	10.36
	SKEWNESS	1.30	1.37	3.46	3.50
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

4 AIRCRAFT 10059 HOURS

ALL DATA

MODEL WP-3A

	4 AIRCRAFI	10009 11	JUNS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
4 AIRCRAFT	MEAN	2.65	.11	.11	.00
10059 HOURS	STD DEV	1.56	.30	.30	.00
	SKEWNESS	.31	.62	.62	.00
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	СОМВАТ	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL S-2D	
------------	--

	67 AIRCRAFT	59015 но	OURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
67 AIRCRAFT	MEAN	33.25	7.71	1.77	.74
58445 HOURS	STD DEV	34.30	9.23	5.36	4.85
	SKEWNESS	1.72	1.98	6.51	7.25
	COMBAT	2.0G	2.5G	3.0G	3.5G
8 AIRCRAFT	MEAN	25.35	2.10	.00	.00
570 HOURS	STD DEV	**	**	**	**
	SKEWNESS	**	**	**	**
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL S-2E

230	AIRCRAFT	598341	HOLLDC
230	AIRCRAFI	220241	muura.

NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
230 AIRCRAFT	MEAN	71.20	12.72	2.91	1.05
569460 HOURS	STD DEV	265.44	42.40	7.19	3.56
	SKEWNESS	5.23	8.57	2.30	2.56
	COMBAT	2.0G	2.5G	3.0G	3.5G
65 AIRCRAFT	MEAN	40.67	7.47	1.14	.42
28881 HOURS	STD DEV	67.96	7.95	1.70	1.33
	SKEWNESS	5.07	2.05	2.66	5.00
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL S-2G

	48 AIRCRAFT	56173	HOURS		
NAVY					
	TRAINING	2.0G	2.5G	3.0G	3.5G
48 AIRCRAFT	MEAN	48.11	7.97	2.54	1.27
56173 HOURS	STD DEV	117.63	14.88	6.79	3.89
	SKEWNESS	5.18	2.04	2.57	2.71
	СОМВАТ	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	2.0G	2.5G	3.0G	3.5G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL T-2A

147 AIRCRAFT 584869 HOURS

NAVY					
	TRAINING	4.0G	5.0G	6.0G	7.0G
147 AIRCRAFT	MEAN	591.14	44.72	4.84	.89
584869 HOURS	STD DEV	446.55	58.91	6.48	2.09
	SKEWNESS	.74	1.99	1.83	2.81
	COMBAT	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	4.0G	5.0G	6.0G	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	4.0G 	5.0G	6.0G 	7.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL T-2B

90 AIRCRAFT 155182 HOURS

NAVY					
	TRAINING	5.0G	6.0G	7.0G	8.0G
90 AIRCRAFT	MEAN	215.91	24.27	2.51	.38
155182 HOURS	STD DEV	244.44	38.78	4.09	.79
	SKEWNESS	3.00	3.71	3.42	1.63
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	5.0G	6.0G	7.0G	8.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL T-28C

51 AIRCRAFT 180050 HOURS

NAVY					
	TRAINING	3.0G	4.0G	5.0G	6.0G
51 AIRCRAFT	MEAN	1011.53	129.84	7.52	.52
180050 HOURS	STD DEV	1170.42	176.91	11.43	1.58
	SKEWNESS	02	.41	1.06	3.27
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

ALL DATA

MODEL T-34B

77 AIRCRAFT 202447 HOURS

NAVY					
	TRAINING	3.0G	4.0G	5.0G	6.0G
77 AIRCRAFT	MEAN	1376.68	204.45	19.49	1.05
202447 HOURS	STD DEV	1496.15	246.86	24.66	4.43
	SKEWNESS	.04	.40	.83	7.06
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
MARINE					
	TRAINING	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*
	COMBAT	3.0G	4.0G	5.0G	6.0G
0 AIRCRAFT	MEAN	*	*	*	*
0 HOURS	STD DEV	*	*	*	*
	SKEWNESS	*	*	*	*

APPENDIX B

THE DETERMINATION OF SAMPLE STATISTICS FOR COUNTING ACCELEROMETER DATA

APPENDIX B

Subj: The Determination of Sample Statistics for Counting Accelerometer Data

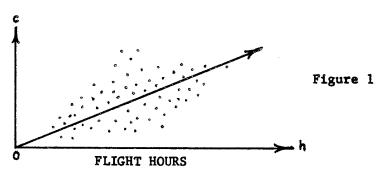
Ref: (a) Browlee, K.A., "Statistical Theory and Methodology in Science and Engineering," Wiley 1965, pp. 358-359

(b) Dixon & Massey, Introduction to Statistical Analysis, McGraw-Hill, Second Edition, 1957, pp. 194-195

1. The purpose of this appendix is to describe the methods used at NAVAIRDEVCEN in calculating statistics describing counting accelerometer data. The subsequent outlined sequence is repeated for each aircraft model, for each mission category, and for each g-level where there is sufficient data.

2. These are the methods used for determining sample statistics. Consider a scatter diagram of cumulative counts (at any g-level) vs. flight hours,

Cumulative Counts



where each dot represents the cumulative counts and flight hours accrued by an individual serial number which is flying or has flown.

Let h_i be the total quality control accepted flight hours for the i^{th} plane (i=1, 2---N)

Let c_i be the cumulative counts during the h_i hours for the ith plane (i=1, 2---N)

N is the total number of aircraft of this model and mission category for which there is recorded information.

Then

(1)
$$b = \frac{\sum_{i=1}^{N} c_{i}h_{i}}{\sum_{i=1}^{N} h_{i}^{2}}$$
 where b is slope of line (Figure 1) through origin fitted by least squares.

(2) x = 1000b estimated mean load exceedances at 1000 hours

(3)
$$\frac{1}{h} = \frac{\sum_{i=1}^{N} h_i}{\sum_{i=1}^{N} n_i}$$
 average flight hours

(4)
$$\hat{O}_{ch}^{2} = \sum_{i=1}^{N} \frac{(c_{i}-bh_{i})^{2}}{N-1}$$

$$\hat{O}_{ch}^{2} = \sqrt{\hat{O}_{ch}^{2}}$$

estimator of the population standard error squared of the regression

estimator of the population standard error of the regression

(5)
$$S = \sqrt{1000 \frac{\Lambda^2}{ch} \frac{1}{h}}$$

estimated standard deviation (counts at 1000 hours) of the load exceedances for each g-level

(6)
$$A_3 = \frac{\sum_{i=1}^{N} (c_{i}-bh_{i})^3}{N c_{h}^{3}}$$

estimated skewness

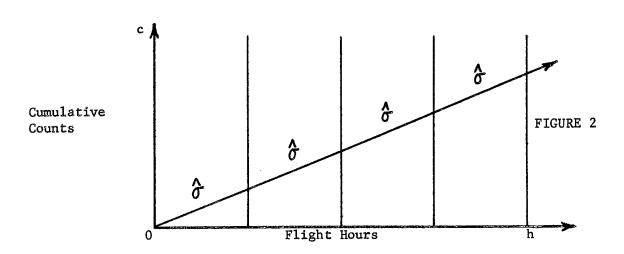
3. The following is the explanation and justification for these methods:

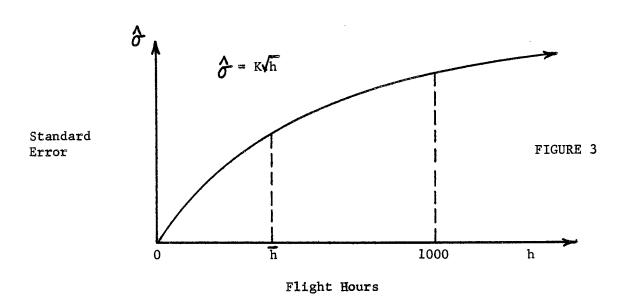
Aircraft which do not have any flight hours must have zero counts; therefore, the line in figure 2 must go through (0,0). Brownlee (reference (a)) describes the methods for fitting a least squares line through the origin (0,0). The slope of this line is the estimated mean exceedance rate (per hour). Multiplying this rate by 1000 will result in exceedances at 1000 hours (equation (2)). Multiplying b by any other h number of hours will result in mean exceedances at h hours.

If the data in figure 1 were separated into flight hour intervals (see figure 2) and the standard error in each interval were plotted against average flight hours (see figure 3) in that interval, the resultant curve is assumed to have the square root functional form.* Due to limitations in sample size, these individual 0's could not be determined accurately; thus, it was necessary to calculate a single 0ch for all h combined and apply it at h.** Equation (5) uses figure 3 to convert 0ch at h to S at 1000 hours.

* This is partially justified by the fact that the variance of a sum of independent random variables is equal to the sum of the independent variances. Unreported statistical tests performed at NAVAIRDEVCEN show that figure 3 is a reasonable fit to actual data. It should be noted that the 0's in figure 2 are estimated by equation (4), but each 0 was calculated using the data points in the respective interval.

**The estimated standard error \hat{O} ch is used as the standard error of estimate for a hypothetical distribution of planes all having \hat{h} hours. This follows from work in reference (b).





If one wanted the standard error at some other value of hours h, he would simply replace 1000 in equation (5) by that value of hours h, and the appropriate standard error would result.

Skewness A_3 is computed in equation (6). This measure indicates whether more airplane load exceedances are above the mean line or below the mean line. If:

 $A_3
abla 0$ More load exceedances are above mean line than below

 $A_3 = 0$ Equal number of load exceedances above and below mean

 $A_3 > 0$ More load exceedances are below mean line than above

(Strictly speaking a distribution is symmetrical only if all its odd moments are zero; however, the above statement is approximately true.)

4. For ease of computation, equation (4) can be expanded as follows:

(7) (N-1)
$$\hat{O}_{ch}^2 = \sum_{i=1}^{N} c_i^2 - 2b \sum_{i=1}^{N} c_i h_i + b^2 \sum_{i=1}^{N} h_i^2$$

but
$$b = \frac{\sum_{i=1}^{N} c_i h_i}{\sum_{i=1}^{N} h_i^2}$$

and (7) can be reduced to

$$(N-1) \hat{O}_{ch}^{2} = \sum_{i=1}^{N} c_{i}^{2} - 2b \sum_{i=1}^{N} c_{i}^{h_{i}} + b \frac{\sum_{i=1}^{N} c_{i}^{h_{i}} \sum_{i=1}^{N} h_{i}^{2}}{\sum_{i=1}^{N} h_{i}^{2}}$$

(8)
$$\begin{array}{c} \underset{\text{ch}}{\text{then}} & \left[\sum_{i=1}^{N} c_i^2 - b \sum_{i=1}^{N} c_i^h_i \right] \\ \end{array}$$

Equation (8) will be used in lieu of equation (4) in determining $\hat{\mathcal{O}}_{\mathrm{ch}}^{2}$.

5. An example using training Navy data, 12 airplanes 4.0G level:

Number	Counts (c _i)	Hours (h _i)	
1	1567	1341.7	
2	649	618 .2	
3	1114	1100.8	
4 .	5	27.3	
5	768	691.7	
6	23	139.6	
7	396	555.1	
8	718	831.3	
9	854	839.1	
10	536	695.4	
11	910	775.3	
12	160	233.0	

The following are tabulated:

$$\sum_{i=1}^{N} h_i = 7848.5$$

$$\sum_{i=1}^{N} c_i = 7700$$

$$\sum_{i=1}^{N} c_i h_i = 6913341.6$$

$$\sum_{i=1}^{N} h_i^2 = 6735017.87$$

$$\sum_{i=1}^{N} c_{i}^{2} = 7250716.00$$

$$\sum_{i=1}^{N} (c_i - bh_i)^3 = -7082690$$

and are used in the following equations:

(1)
$$b = \frac{6913341.6}{6735017.87} = 1.02647$$
 cts. per hr.

(2)
$$\bar{x} = 1000 \ (1.02647) = 1026.47 \ \text{cts.}$$
 at 1000 hours

(3)
$$\bar{h} = \frac{7848.5}{12} = 654.04 \text{ hours}$$

(4)
$$\hat{O}_{ch}^2 = \frac{7250716 - 1.02647 (6913341.6)}{11} = 14034$$
 $\hat{O}_{ch} = 118.5$

(5)
$$S = \sqrt{1000 (14034)/654} = 146.46 \text{ cts.}$$
 at 1000 hours

(6)
$$A_3 = \frac{-7082690}{12 (118.5)} 3 = -.36$$

DISTRIBUTION LIST

REPORT CONTROL SYMBOL NADC 13920-2

AIRTASK A53530/202/78012-74-84 WORK UNIT NO. DX 701

		NO. COP	
NAVAIR (AIR-954)	AIR-1014, AIR-510, , AIR-530221,	• •	20
COMNAVAIRPAC (TECHNICAL LIBRARY) COMMATVAQWINGPAC, OAK HARBOR, WA COMTACWINGLANT, OCEANA, VA COMNAVSAFCEN COMLIGHTATKWINGPAC, LEMORE, CA COMLIGHTATKWING ONE, CECIL FIELD, FL COMFITWING ONE, OCEANA, VA COMFITAEWINGPAC, SAN DIEGO, CA COMPATWINGSLANT, BRUNSWICK, ME COMPATWINGSPAC, MOFFETT FIELD, CA COMTACSUPWING ONE, NORFOLK, VA NAVAIRSYSCOMREPLANT NAVAIREWORKFAC, ALAMEDA (CODES 300, 310, NAVAIREWORKFAC, CHERRY POINT (CODES 300, NAVAIREWORKFAC, JACKSONVILLE (CODES 300, NAVAIREWORKFAC, NORFOLK (CODES 300, 310, NAVAIREWORKFAC, NORFOLK (CODES 300, 310, NAVAIREWORKFAC, NORFOLK (CODES 300, 310, NAVAIREWORKFAC, NORTH ISLAND (CODES 05A, NAVAIREWORKFAC, PENSACOLA (CODES 300 AND CNO (ONE FOR CODES OP-05M, OP-50, OP-501D,	AND 052) 310, AND 321) 310, AND 05A) AND 05A) 300, 310, AND 5203 310)		2111111113333427
OP-52, OP-59) PACIFIC MISSILE TEST CENTER, POINT MUGU, (CODE 6862, CODE 1243)	CA		2
COMPAIRWESTPAC, FPO SEATTLE (CODE 724.1) CGSECONDMAW Nove Services (CASA)		• •	1 1

